

PRIMARY SOURCES ON FORTIFICATIONS

"To George Washington from Major General John Armstrong, 19 December 1777," Founders Online, National Archives, last modified June 13, 2018, <http://founders.archives.gov/documents/Washington/03-12-02-0577>. [Original source: The Papers of George Washington, Revolutionary War Series, vol. 12, 26 October 1777?–25 December 1777, ed. Frank E. Grizzard, Jr. and David R. Hoth. Charlottesville: University Press of Virginia, 2002, pp. 632–634.]

"General Orders, 15 January 1778," Founders Online, National Archives, last modified June 13, 2018, <http://founders.archives.gov/documents/Washington/03-13-02-0203>. [Original source: The Papers of George Washington, Revolutionary War Series, vol. 13, 26 December 1777–28 February 1778, ed. Edward G. Lengel. Charlottesville: University of Virginia Press, 2003, pp. 243–246.]

"To George Washington from Brigadier General Duportail, 18 January 1778," Founders Online, National Archives, last modified June 13, 2018, <http://founders.archives.gov/documents/Washington/03-13-02-0226>. [Original source: The Papers of George Washington, Revolutionary War Series, vol. 13, 26 December 1777–28 February 1778, ed. Edward G. Lengel. Charlottesville: University of Virginia Press, 2003, pp. 262–266.]

"Officers who are desirous of taking Commissions in the company of sappers under the Command of Brigadier General Du Portail and possess the necessary qualifications, such as the knowledge of practical Geometry & drawing will give in their Names at the Adjt General's office: Three Captains, three first & three second Lieutenants are wanting."¹

"That the timber prevalent about Valley Forge, previously to its being fallen for the use of the American army, in the autumn of 1777, and winter and spring of 1778, consisted of white oak, black oak, spanish oak, rarely interspersed with scrubby chestnut and hickory."²

Contemporary Maps of Valley Forge Winter Encampment

Antoine-Jean-Louis Le Bègue De Presle Duportail, Plan of the position of Valley Forge after Jany. [1778] Map, <https://www.loc.gov/item/gm71000935/>.

"Tredyffrin History Digital Archives: The William Davis Map" Tredyffrin Easttown Historical Society, last modified September 5, 2018,

<http://the2nomads.org/18CTredyffrin/Military/WilliamDavisMap.html>.

1777.25 PROGRESS OF THE BRITISH ARMY FROM THE LANDING IN ELK RIVER TO THE TAKING POSSESSION OF PHILADELPHIA ANNO 1777. "This manuscript map shows Howe's route of march north from the Chesapeake to surround the city. The road network is shown in detail. It is attributed to Capt. John Andre, the same British officer later executed in the Benedict Arnold affair. Illustrated on page 55 of Marshall & Peckham. This image is from the Library of Congress. There are two manuscript maps attributed to Andre concerning the Mud Island operations listed in Docktor #277A2, #277A2.0A. A military journal of Andre is at the Huntington Library. It contains several manuscript maps on Brandywine, Germantown, the Philadelphia fortifications, and the operations against Mud Island; see Guthorn (1972) #2."³

¹ "General Orders, 8 February 1778," Founders Online, National Archives, last modified June 13, 2018, <http://founders.archives.gov/documents/Washington/03-13-02-0392>. [Original source: The Papers of George Washington, Revolutionary War Series, vol. 13, 26 December 1777–28 February 1778, ed. Edward G. Lengel. Charlottesville: University of Virginia Press, 2003, pp. 473–476.]

² "On Timber at Valley Forge," Letter from Isaac Wayne, Esq., Easttown, Chester County (PA) to Richard Peters, Philadelphia, 4 March 1814, in "Memoirs of the Philadelphia Society for Promoting Agriculture, Containing Communications on Various Subjects in Husbandry and Rural Affairs," Vol III. (Philadelphia: Johnson and Warner, 1814), 376.

³ Harold Cramer, "1775 to 1779 Pennsylvania Maps," Historical Maps of Pennsylvania, last modified May 28, 2018, <http://www.mapsofpa.com/antiquemaps27b.htm>.

1777.27 (Valley Forge) "On page 63 in Marshall & Peckham is an anonymous, untitled and undated manuscript map of the encampment at Valley Forge during the winter of 1777-78, probably done by a British spy who actually visited the camp. It indicates Washington's headquarters and shows the encampment as three long rows of shacks or tents. Many historians have tried to portray this dismal time as a moral victory for Washington. The map was apparently found in the papers of General Henry Clinton and is now in the William Clements Library. The Pennsylvania Archives, in Manuscript Group 11 #730, has a facsimile map "Contemporary Map of the Encampment at Valley Forge 1777-1778," by a French engineer, from the original in the Library of Hon. Samuel W. Pennypacker, LL.D., copyright by the Pennsylvania Society of the Sons of the Revolution, 1898. Roads, Flatland Ford, River, Bridge, encampments, old headquarters are shown. This appears to be a different contemporary manuscript map of Valley Forge. Docktor #278A9 lists a manuscript map of Valley Forge in the Jared Sparks papers at Cornell University Library dated 1778, and also one (#278A9.0C) in the Library of Congress. Guthorn (#51-D2) lists a color wash manuscript map 14 x 20 inches, and (#51 D 4) a 13 x 15 inch manuscript map dated to 1778; both of Valley Forge and held at the Historical Society of Pennsylvania. Winsor illustrates a composite map of Valley Forge shown here prepared from at least two sources."⁴

1778.27 A CHOROGRAPHICAL MAP, OF THE COUNTRY, ROUND PHILADELPHIA. By B-Romans. "The map is dated from ads which appeared for it in newspapers of the time. Valley Forge is shown and called "Grand American Winter Camp January 1778." The map was republished circa 1780 with the added title CARTE PARTICULIERE DES ENVIRONS DE PHILADELPHIE. K. Klockhoff sculps. A Amsterdam, chez Covens et Mortier, et Covens, junior. This image of the Klockhoff print comes from the Library of Congress. Wheat & Brun #304, Phillips page 701, Guthorn #41-7,8."⁵

⁴ Harold Cramer, "1775 to 1779 Pennsylvania Maps," <http://www.mapsofpa.com/antiquemaps27b.htm>.

⁵ Harold Cramer, "1775 to 1779 Pennsylvania Maps," <http://www.mapsofpa.com/antiquemaps27b.htm>.

- (153) Which of the earthworks at Yorktown Battlefield are original and which are reconstructions?

Answer: The only earthwork remaining from 1781 is a small British redoubt (called the "Untouchable Redoubt") located on the encampment tour road just North of Goosley Road. (Borreson, p. 20) All of the earthworks around Yorktown that are today called the British Inner Defense Line actually date to the Civil War. They were built by Confederate troops prior to the Peninsular campaign of 1862, following (although not exactly) the line of the old British works of 1781, which had deteriorated greatly by that time (See Diagram 9 on p. E-5). (Thompson, pp. 151, 155, 162-5, 245) All of the other earthworks on the battlefield were reconstructed by the NPS in the 1930-40's, 1950's or 1970's. (Barnes, pp. 7-9, 16) See also questions 288 below about what constitutes a "reconstruction."

EARTHWORKS TERMINOLOGY

- (154) What names are given to the various parts of typical earthwork fortifications?

Answer: (See Diagram 10 on p. E-6)

- (155) What is a hornwork?

Answer: It was a large earthwork configuration (vaguely shaped like an animal horn) that extended outward from the main part of a defensive line to protect high ground, etc. (James, pp. 252-3) At Yorktown, the British Hornwork extended from the main line to dominate the road to Hampton. (See Diagram 9 on p. E-5)

- (156) What is a redoubt?

Answer: This was a small fort constructed of earthworks. Redoubts were built in a variety of shapes, and could be either isolated (such as Redoubts 9 and 10 at Yorktown) or incorporated into long lines of earthworks. (Greene, pp. 30-3)

- (157) What is a gabion?

Answer: A gabion was a large woven basket made from three branches, open at the top and bottom, filled with earth to become part of a reinforced earthwork. Gabions gave structure to the earthwork and made it stronger than it would be otherwise. (Greene, p. 23; Wilbur, pp. 70-1, has a good diagram showing the use of gabions).

- (158) What is a fascine?

Answer: A fascine was a bundle of sticks or branches tied together to create a sausage-shaped reinforcement for earthworks. (Greene, p. 23; Wilbur, pp. 70-1, has a good diagram showing the use of fascines).

(159) What is a saucisson?

Answer: This was a bundle of sticks similar to a fascine, only much longer ("saucisson" is the French word for sausage). (Greene, p. 23)

(160) What is a fraize?

Answer: A fraize was one of many large, pointed stakes protruding from the side of an earthwork structure to impede or prevent an assault by enemy troops (an example would be the fraises surrounding Redoubts 9 and 10). (Greene, p. 24)

(161) What are abatis?

Answer: They were trees that had been cut down and whose branches were sharpened to serve as a type of "barbed wire" to protect a fortified position. Abatis were anchored around the redoubts at Yorktown, with their branches pointed outward. (Greene, p. 26)

(162) Why were French words used to label the things associated with siege warfare during the 18th century?

Answer: French military writers had been primarily responsible for developing the techniques of siege warfare, and the French were generally considered to be experts in the field. (Thompson, pp. 45-7)

DEVELOPMENT OF SIEGE WARFARE

(163) What military theorists and writers influenced the development of siege warfare most?

Answer: By far the most experienced, knowledgeable and influential writer was the Frenchman Sebastian de Pietre de Vauban (1633-1707), whose books on siege warfare and other military subjects make him one of the greatest military thinkers in history. Another writer who greatly influenced American and British militarists in the field of siege warfare was the Englishman John Muller, whose principles (influenced by those of Vauban) were followed during the construction of the earthworks at Yorktown in 1781. (Greene, pp. 20-22; and Thompson, pp. 45-8)

Read Also:

John Muller, *The Attac and Defence of Fortify'd Places* (J. Millan, 1757),

<https://books.google.com/books?id=4EUIAAAAQAAJ>.

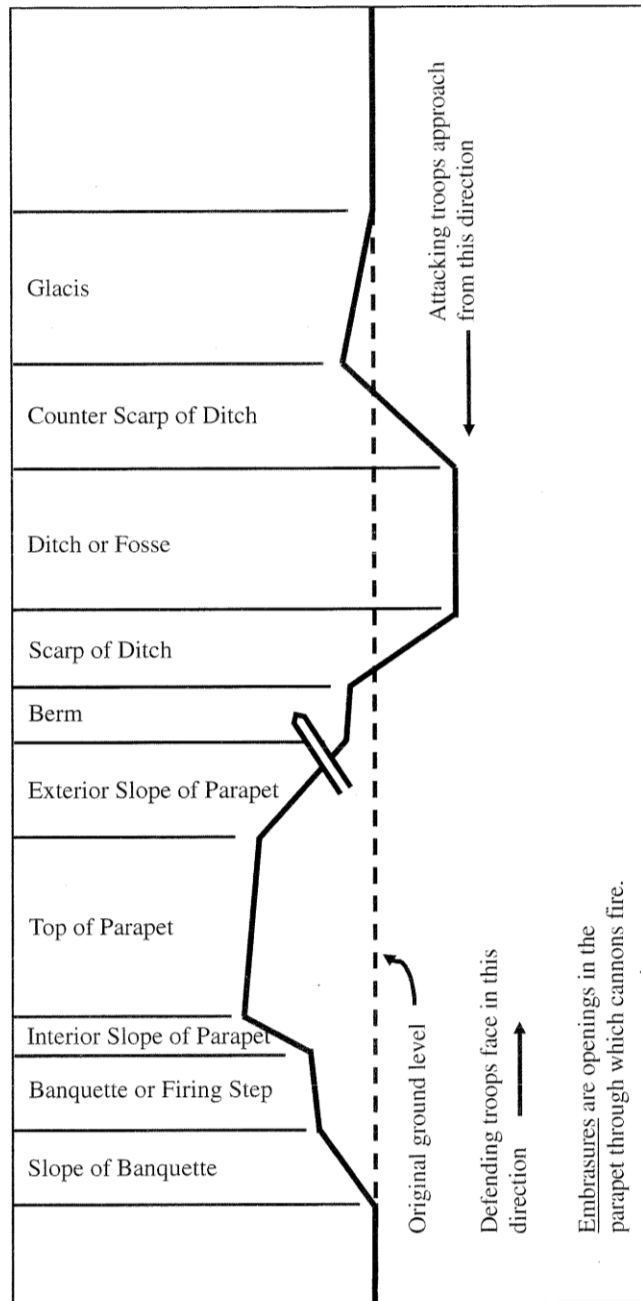


DIAGRAM 10: NAMES GIVEN TO THE PARTS OF EARTHWORKS

The cross section above represents the parapet/ditch structure of a typical redoubt. The words written vertically name the sections of structure shown between the vertical lines. (Adapted from Greene, p. 427; see question 154)